WHAT WE CLAIM IS:

1. An image-forming optical system having a positive refracting power as a whole for forming an object image, said image-forming optical system comprising, in order from an object side thereof:

a front unit including at least a first prism;

an aperture stop; and

a rear unit including a second prism;

wherein said first prism and said second prism are each formed from a medium having a refractive index (n) larger than 1.3 (n>1.3), and wherein no intermediate image is formed;

said first prism having three optical functional surfaces transmitting or reflecting a light beam;

wherein when said three optical functional surfaces are defined as a first-first surface, a first-second surface, and a first-third surface, respectively, said first-first surface allows a light beam from an object side thereof to enter said first prism through it, said first-second surface reflects the light beam entering through said first-first surface within said first prism, and said first-third surface allows the light beam reflected from said first-second surface to exit said first prism through it;

said second prism having four optical functional surfaces transmitting or reflecting a light beam;

wherein when said four optical functional surfaces are defined as a second-first surface, a second-second

surface, a second-third surface, and a second-fourth surface, respectively, said second-first surface allows a light beam from an object side thereof to enter said second prism through it, said second-second surface reflects the light beam entering through said second-first surface within said second prism, said second-third surface reflects the light beam reflected from said second-second surface within said second prism, and said second-fourth surface allows the light beam reflected from said second-third surface to exit said second prism through it, and wherein said second-first surface and said second-second surface are disposed to face each other across said medium, and said second-third surface and said second-fourth surface are disposed to face each other across said medium, and further an optical path connecting said second-first surface and said second-second surface intersects an optical path connecting said second-third surface and said second-fourth surface;

wherein said first-second surface of said first prism has a rotationally asymmetric surface configuration that gives a power to a light beam and corrects aberrations due to decentration; and

wherein said second-second surface and said second-third surface of said second prism have a curved surface configuration that gives a power to a light beam, said curved surface configuration being a rotationally asymmetric surface configuration that corrects aberrations due to decentration.

2. An image-forming optical system according to claim 1, wherein three reflecting surfaces of said first prism and said second prism are plane-symmetry free-form surfaces each having only one plane of symmetry.

3. An image-forming optical system according to claim 1 or 2, wherein when a decentration direction of said image-forming optical system is a Y-axis direction, and a plane parallel to an axial principal ray is a YZ-plane, and further a direction perpendicularly intersecting the YZ-plane is an X-axis direction, the following conditions are satisfied:

$$-0.5<P1x/Px<0.4 \quad \cdots(1\text{-}1)$$

$$-0.5<P1y/Py<0.4 \quad \cdots(2\text{-}1)$$

where P1x is a power in the X-axis direction of said front unit including said first prism; P1y is a power in the Y-axis direction of said front unit; Px is a power in the X-axis direction of said image-forming optical system; and Py is a power in the Y-axis direction of said image-forming optical system.

4. An image-forming optical system according to claim 1 or 2, wherein when a decentration direction of said image-forming optical system is a Y-axis direction, and a plane parallel to an axial principal ray is a YZ-plane, and further a direction perpendicularly intersecting the YZ-plane is an X-axis direction, the following conditions are satisfied:

$$0.3<P2x/Px<2.0 \quad \cdots(3\text{-}1)$$

$$0.3<P2y/Py<2.0 \quad \cdots(4\text{-}1)$$

where P2x is a power in the X-axis direction of said rear unit including said second prism; P2y is a power in the Y-axis direction of said rear unit; Px is a power in the X-axis direction of said image-forming optical system; and Py is a power in the Y-axis direction of said image-forming optical system.

5. An image-forming optical system according to claim 1 or 2, wherein the following condition is satisfied:

$$70°<\theta<110° \quad \cdots(5\text{-}1)$$

where θ is an angle formed between an axial principal ray incident on said first-second surface and the axial principal ray reflected therefrom.

6. An image-forming optical system according to claim 1 or 2, wherein the following condition is satisfied:

$$0.5<D/f<2.5 \quad \cdots(6\text{-}1)$$

where D is a thickness of said image-forming optical system, and f is a mean focal length of said image-forming optical system, wherein said thickness D of said image-forming optical system is a thickness of said image-forming optical system measured from an image pickup device in a direction perpendicular to the image pickup device, which is a distance from a forwardmost ray position among rays within said image-forming optical system to an image plane, and said mean focal length f is defined as f=(fx+fy)/2, where fx is a focal length in the X-axis direction of said image-forming optical system, and

fy is a focal length in the Y-axis direction of said image-forming optical system.

7. An image-forming optical system according to claim 1 or 2, wherein the following condition is satisfied:

$$0.1<SD1/f<3.0 \quad \cdots(7\text{-}1)$$

where SD1 is an optical path length of an axial principal ray from said first-second surface of said front unit, which is a reflecting surface, to said aperture stop, and f is a mean focal length of said image-forming optical system, wherein said mean focal length f is defined as f=(fx+fy)/2, where fx is a focal length in the X-axis direction of said image-forming optical system, and fy is a focal length in the Y-axis direction of said image-forming optical system.

8. An image-forming optical system according to claim 1 or 2, wherein either of the following conditions is satisfied:

$$0.5<SD2/f<3.0 \quad \cdots(8\text{-}1)$$

$$2.0<SD3/f<6.0 \quad \cdots(9\text{-}1)$$

where SD2 is an optical path length of an axial principal ray from a first surface of said front unit that is closest to the object side to said aperture stop; SD3 is an optical path length of the axial principal ray from said aperture stop to a final surface of said rear unit that is closest to the image side; and f is a mean focal length of said image-forming optical system, wherein said mean focal length f is defined as f=(fx+fy)/2, where fx is

a focal length in the X-axis direction of said image-forming optical system, and fy is a focal length in the Y-axis direction of said image-forming optical system.

9. An image-forming optical system according to claim 1 or 2, wherein at least one optical element is placed on an object side of said first prism.

10. An image-forming optical system according to claim 1 or 2, wherein at least one optical element is placed between said first prism and said second prism.

11. An image-forming optical system according to claim 9, wherein at least one surface of said optical element has a rotationally asymmetric surface configuration that corrects aberrations due to decentration.

12. An image-forming optical system according to claim 1 or 2, wherein said rear unit consists of said second prism.

13. An image-forming optical system according to claim 1 or 2, wherein the first prism in said front unit comprises a single mirror.

14. An image-forming optical system according to claim 1 or 2, wherein the second prism in said rear unit comprises two mirrors.

15. An image-forming optical system according to claim 1 or 2, wherein the first prism in said front unit comprises a single mirror, and the second prism in said rear unit comprises two mirrors.

16. A finder optical system comprising:

said image-forming optical system according to claim 1 or 2, said image-forming optical system being provided as a finder objective optical system;

an image-erecting optical system for erecting an object image formed by said finder objective optical system; and

an ocular optical system.

17. An electronic camera apparatus comprising:

said image-forming optical system according to claim 1 or 2;

an image pickup device placed in an image plane formed by said image-forming optical system;

a recording medium for recording image information received by said image pickup device; and

an image display device that receives image information from one of said recording medium and said image pickup device to form an image for observation.

18. An endoscope system comprising:

an observation system having said image-forming optical system according to claim 1 or 2 and an image transmitting member for transmitting an image formed by said image-forming optical system along a longitudinal axis; and

an illumination system having an illuminating light source and an illuminating light transmitting member for transmitting illuminating light from said illuminating light source along said longitudinal axis.